

Title (en)

Nucleating gel, process for its preparation, and its use in the synthesis of MFI-type zeolite

Title (de)

Keimbildungsgel, Verfahren zu dessen Herstellung, und deren Verwendung für die Synthese von Zeolith ZSM-5

Title (fr)

Gel de nucléation, son procédé de préparation et son utilisation dans la synthèse de zéolite de type MFI

Publication

EP 1707533 A1 20061004 (EN)

Application

EP 05075770 A 20050401

Priority

EP 05075770 A 20050401

Abstract (en)

Process for the preparation of a nucleating gel, which process comprises the steps of: mixing sodium silicate, water, and a quaternary ammonium salt, adjusting the molar ratio OH⁻/SiO₂ in the mixture to a value in the range 0.20-0.60 by adding an acid or base, and aging the mixture for at least 30 minutes at a temperature in the range 25 to 100°C. This process results in a nucleating gel which is very active in the synthesis of MFI zeolites.

IPC 8 full level

C01B 39/04 (2006.01); **C01B 39/40** (2006.01)

CPC (source: EP)

C01B 39/04 (2013.01); **C01B 39/40** (2013.01)

Citation (search report)

- [DX] US 4606900 A 19860819 - KACIREK HARMUT [DE], et al
- [DA] WO 03074423 A1 20030912 - AKZO NOBEL NV [NL]
- [A] WO 03080510 A1 20031002 - COUNCIL SCIENT IND RES [IN]
- [A] US 5330736 A 19940719 - WU JIANXIN [US], et al
- [A] DATABASE COMPENDEX [online] ENGINEERING INFORMATION, INC., NEW YORK, NY, US; MEGED' N F ET AL: "Synthesis of pentasil type zeolite with injection of amorphous seeds", XP002348973, Database accession no. EIX92111370548
- [A] DATABASE INSPEC [online] THE INSTITUTION OF ELECTRICAL ENGINEERS, STEVENAGE, GB; March 2004 (2004-03-01), HE CHI-JIAN ET AL: "Studies on the synthesis of Fe-[beta] zeolite by using nucleation gel", XP002348974, Database accession no. 8267743
- [A] KASSAHARA S ET AL: "CLEAR AQUEOUS NUCLEI SOLUTION FOR FAUJASITE SYNTHESIS", PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON ZEOLITES, 1986, pages 185 - 192, XP008053973 & KHIM TEKHNOL TOPL MASEL; KHIMIYA I TEKHNLOGIYA TOPLIV I MASEL FEB 1992, no. 2, February 1992 (1992-02-01), pages 13 - 14 & JOURNAL OF NATURAL SCIENCE OF HUNAN NORMAL UNIVERSITY HUNAN NORMAL UNIV CHINA, vol. 27, no. 1, March 2004 (2004-03-01), pages 51 - 54, ISSN: 1000-2537

Cited by

WO2011095140A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 1707533 A1 20061004

DOCDB simple family (application)

EP 05075770 A 20050401